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# CYP24A1 Polyclonal Antibody

Catalog # AP69381

## Product Information

| | |
|---|---|
| **Application** | WB, IHC-P, IF, ICC, E |
| **Primary Accession** | Q07973 |
| **Reactivity** | Human, Rat, Mouse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 58875 |

## Additional Information

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|---|---|
| **Gene ID** | 1591 |
| **Other Names** | CYP24A1; CYP24; 1; 25-dihydroxyvitamin D(3) 24-hydroxylase, mitochondrial; 24-OHase; Vitamin D(3) 24-hydroxylase; Cytochrome P450 24A1; Cytochrome P450-CC24 |
| **Dilution** | WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/10000. Not yet tested in other applications. IHC-P~~N/A IF~~1:50~200 ICC~~N/A E~~N/A |
| **Format** | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide. |
| **Storage Conditions** | -20℃ |

## Protein Information

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|---|---|
| **Name** | CYP24A1 ( HGNC:2602) |
| **Synonyms** | CYP24 |
| **Function** | A cytochrome P450 monooxygenase with a key role in vitamin D catabolism and calcium homeostasis. Via C24- and C23-oxidation pathways, catalyzes the inactivation of both the vitamin D precursor calcidiol (25-hydroxyvitamin D(3)) and the active hormone calcitriol (1-alpha,25-dihydroxyvitamin D(3)) (PubMed:11012668, PubMed:15574355, PubMed:16617161, PubMed:24893882, PubMed:29461981, PubMed:8679605). With initial hydroxylation at C-24 (via C24-oxidation pathway), performs a sequential 6-step oxidation of calcitriol leading to the formation of the biliary metabolite calcitroic acid (PubMed:15574355, PubMed:24893882). With initial hydroxylation at C-23 (via C23-oxidation pathway), catalyzes sequential oxidation of calcidiol leading to the formation of 25(OH)D3-26,23-lactone as end product (PubMed:11012668, PubMed:8679605). Preferentially hydroxylates at C-25 other vitamin D active metabolites, such as |

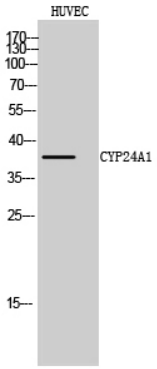
CYP11A1-derived secosteroids 20S- hydroxycholecalciferol and 20S,23-dihydroxycholecalciferol (PubMed:25727742). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via FDXR/adrenodoxin reductase and FDX1/adrenodoxin (PubMed:8679605).

**Cellular Location** Mitochondrion {ECO:0000250|UniProtKB:Q09128}.

## Background

Has a role in maintaining calcium homeostasis. Catalyzes the adrenodoxin-dependent 24-hydroxylation of calcidiol (25- hydroxyvitamin D(3)) and calcitriol (1-alpha,25-dihydroxyvitamin D(3)). The enzyme can perform up to 6 rounds of hydroxylation of calcitriol leading to calcitroic acid. It also shows 23-hydroxylating activity leading to 1-alpha,25-dihydroxyvitamin D(3)-26,23-lactone as end product.

## Images




Western Blot analysis of HUVEC cells using CYP24A1 Polyclonal Antibody

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